HIRING PROCESS ANALYTICS

by Biswajeet Nayak

Project Description

Hiring process is the fundamental and the most important function of a company. We look at trends like number of positions, how many were hired/rejected, their salaries, etc.

In this project we will be working for a MNC such as Google in analysing those data and run queries to get our answer to certain questions.

A. **Hiring:** How many males and females are Hired?
B. **Average Salary:** What is the average salary offered in this company?
C. **Class Intervals:** Draw the class intervals for salary in the company?
D. **Charts and Plots:** Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working different department?
E. **Charts:** Represent different post tiers using chart/graph?

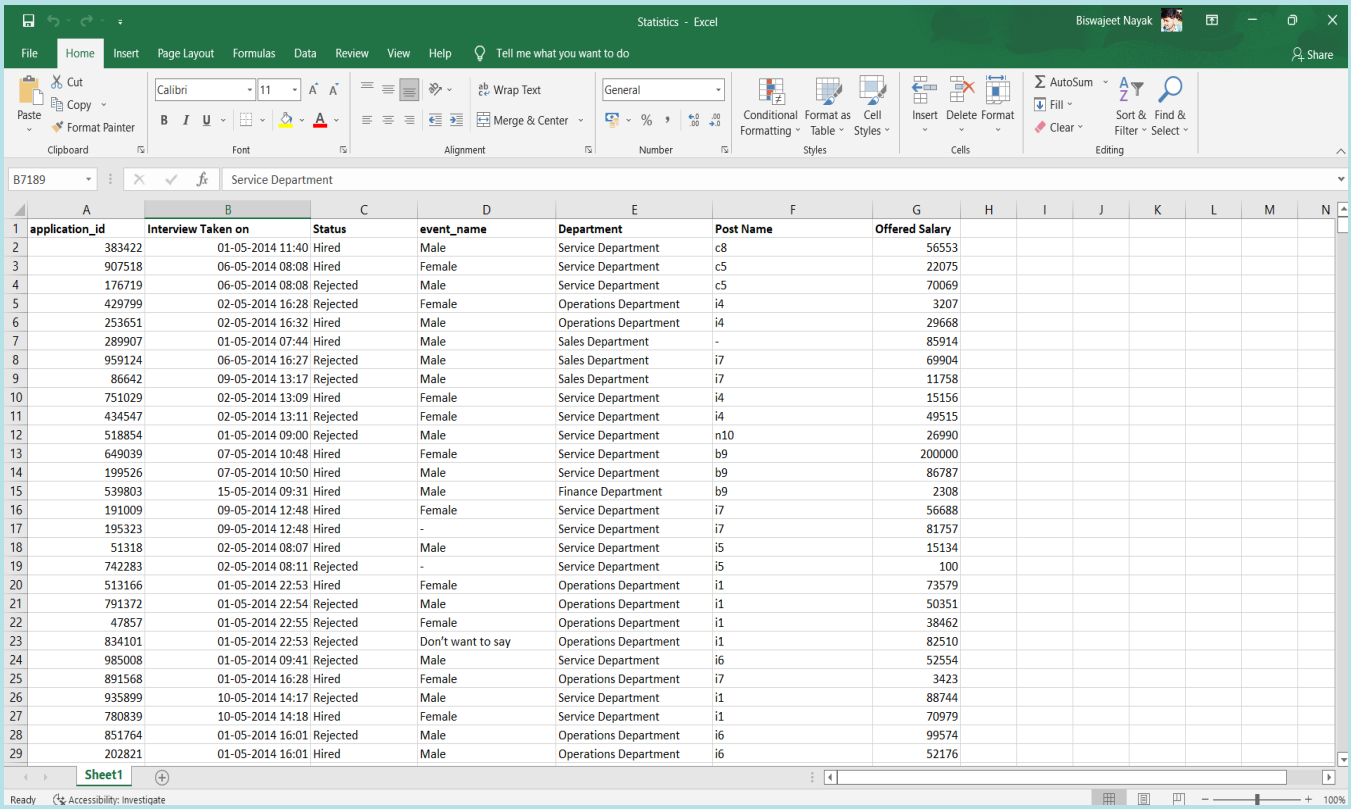
Approach and Tech Used

For this project I used Microsoft Excel to run my queries. Microsoft Excel is a spreadsheet developed by Microsoft for Windows, macOS, Android and iOS. It features calculation or computation capabilities, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications (VBA). Excel forms part of the Microsoft Office suite of software.

I used the Excel sheet provided and ran multiple functions to get the desired answers.

This project helped me in understanding the Excel Table at a much-detailed manner and helped to improve my strength in extracting data from tables and visualize it in the forms of different graphs.

Datasheet



Statistics - Excel — Biswajeet Nayak

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Cut Copy Format Painter — Paste — Clipboard — Calibri 11 — Font — Wrap Text Merge & Center — Alignment — General — Number — Conditional Formatting Format as Table Cell Styles — Styles — Insert Delete Format — Cells — AutoSum Fill Clear Sort & Filter Find & Select — Editing

B7189 — Service Department

	A	B	C	D	E	F	G
1	application_id	Interview Taken on	Status	event_name	Department	Post Name	Offered Salary
2	383422	01-05-2014 11:40	Hired	Male	Service Department	c8	56553
3	907518	06-05-2014 08:08	Hired	Female	Service Department	c5	22075
4	176719	06-05-2014 08:08	Rejected	Male	Service Department	c5	70069
5	429799	02-05-2014 16:28	Rejected	Female	Operations Department	i4	3207
6	253651	02-05-2014 16:32	Hired	Male	Operations Department	i4	29668
7	289907	01-05-2014 07:44	Hired	Male	Sales Department	-	85914
8	959124	06-05-2014 16:27	Rejected	Male	Sales Department	i7	69904
9	86642	09-05-2014 13:17	Rejected	Male	Sales Department	i7	11758
10	751029	02-05-2014 13:09	Hired	Female	Service Department	i4	15156
11	434547	02-05-2014 13:11	Rejected	Female	Service Department	i4	49515
12	518854	01-05-2014 09:00	Rejected	Male	Service Department	n10	26990
13	649039	07-05-2014 10:48	Hired	Female	Service Department	b9	200000
14	199526	07-05-2014 10:50	Hired	Male	Service Department	b9	86787
15	539803	15-05-2014 09:31	Hired	Male	Finance Department	b9	2308
16	191009	09-05-2014 12:48	Hired	Female	Service Department	i7	56688
17	195323	09-05-2014 12:48	Hired	-	Service Department	i7	81757
18	51318	02-05-2014 08:07	Hired	Male	Service Department	i5	15134
19	742283	02-05-2014 08:11	Rejected	-	Service Department	i5	100
20	513166	01-05-2014 22:53	Hired	Female	Operations Department	i1	73579
21	791372	01-05-2014 22:54	Rejected	Male	Operations Department	i1	50351
22	47857	01-05-2014 22:55	Rejected	Female	Operations Department	i1	38462
23	834101	01-05-2014 22:53	Rejected	Don't want to say	Operations Department	i1	82510
24	985008	01-05-2014 09:41	Rejected	Male	Service Department	i6	52554
25	891568	01-05-2014 16:28	Hired	Female	Operations Department	i7	3423
26	935899	10-05-2014 14:17	Rejected	Male	Service Department	i1	88744
27	780839	10-05-2014 14:18	Hired	Female	Service Department	i1	70979
28	851764	01-05-2014 16:01	Rejected	Male	Operations Department	i6	99574
29	202821	01-05-2014 16:01	Hired	Male	Operations Department	i6	52176

Sheet1 — Ready — Accessibility: Investigate — 100%

A. **Hiring:** Process of intaking of people into an organization for different kinds of positions.
Your task: How many males and females are Hired?

Hired	
Male	2563
Female	1856

I used the following function to execute it:

=COUNTIFS(D2:D7169,"Male",C2:C7169,"Hired")
=COUNTIFS(D2:D7169,"Female",C2:C7169,"Hired")

B. **Average Salary:** Adding all the salaries for a select group of employees and then dividing the sum by the number of employees in the group.

Your task: What is the average salary offered in this company?

Diff Department	Avg Salary
Service Department	50629.88418
Operations Department	49151.35438
Sales Department	49310.3807
Finance Department	49628.00694
Production Department	49448.48421
Purchase Department	52564.77477
Marketing Department	48489.93538
General Management	58722.09302
Human Resource Department	49002.27835

I used the following function to execute it:

First, I used the Advanced filter to get unique departments, then I used the following to get the average.

```
=AVERAGEIF(E2:E7169,"Service Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Operations Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Sales Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Finance Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Production Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Purchase Department",G2:G7169)
=AVERAGEIF(E2:E7169,"Marketing Department",G2:G7169)
=AVERAGEIF(E2:E7169,"General Management",G2:G7169)
=AVERAGEIF(E2:E7169,"Human Resource Department",G2:G7169)
```

C. **Class Intervals:** The class interval is the difference between the upper-class limit and the lower-class limit.
Your task: Draw the class intervals for salary in the company?

I used the following function to execute it:

First, I calculated the maximum and minimum salary with this:

=MAX(G2:G7169)
=MIN(G2:G7169)

Then I found out the range (Max – Min), after that I chose the number of bins I wanted which is 5, and then we calculated the call intervals by the formula (Range / Bins).

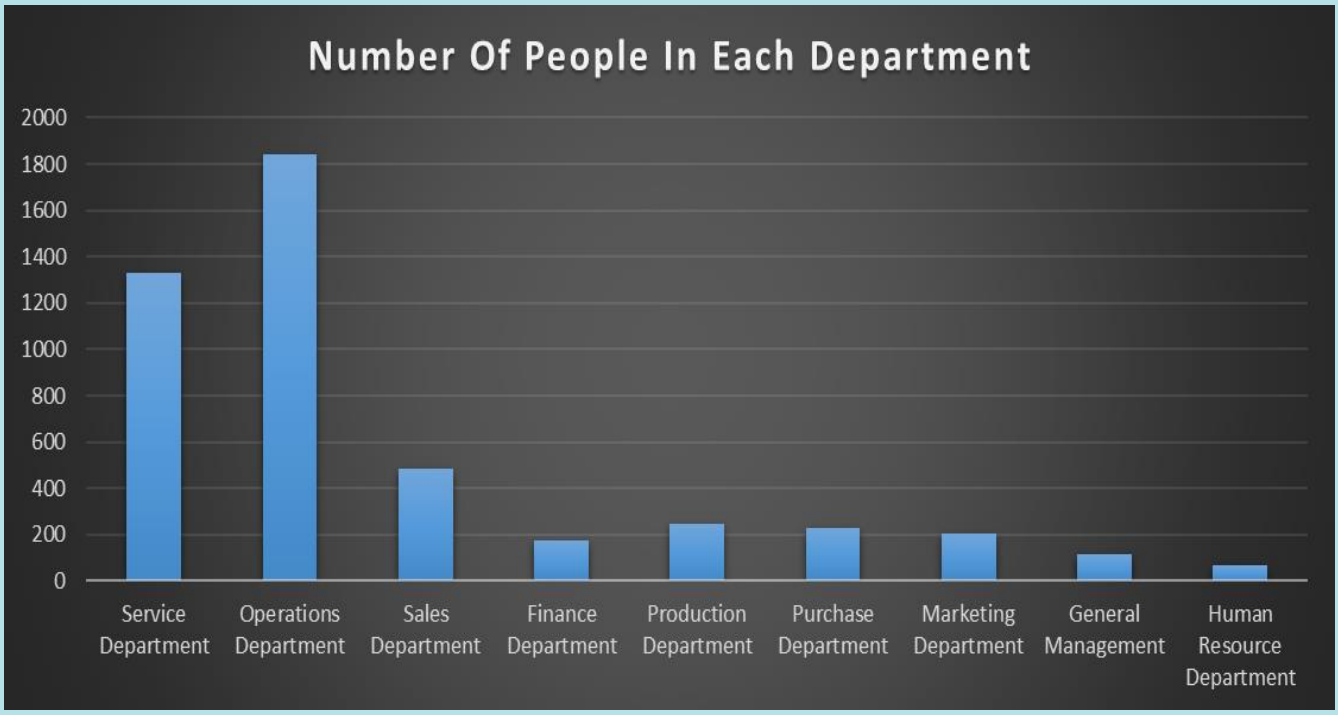
7225				
7226		**Max Salary**	400000	
7227		**Min Salary**	100	
7228		**Diff (Range)**	399900	
7229		**Bins**	5	
7230		**Range/Bins**	79980	
7231				
7232		**Class Intervals for Salary**		
7233		100-80080		
7234		80081-160060		
7235		160061-240040		
7236		240041-320020		
7237		320021-400000		
7238				

For the intervals I used:

=CONCATENATE(LEFT(C7227,3),"-",LEFT(C7227,3)+$C$7230)
=CONCATENATE(RIGHT(B7233,5)+1,"-
",RIGHT(B7233,5)+$C$7230)
=CONCATENATE(RIGHT(B7234,6)+1,"-
",RIGHT(B7234,6)+$C$7230)
=CONCATENATE(RIGHT(B7235,6)+1,"-
",RIGHT(B7235,6)+$C$7230)
=CONCATENATE(RIGHT(B7236,6)+1,"-
",RIGHT(B7236,6)+$C$7230)

D. **Charts and Plots:** This is one of the most important parts of analysis to visualize the data.
Your task: Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working different department?

Diff Department	Number Of Employees
Service Department	1332
Operations Department	1843
Sales Department	485
Finance Department	176
Production Department	246
Purchase Department	230
Marketing Department	202
General Management	113
Human Resource Department	70



I used the following function to execute it:

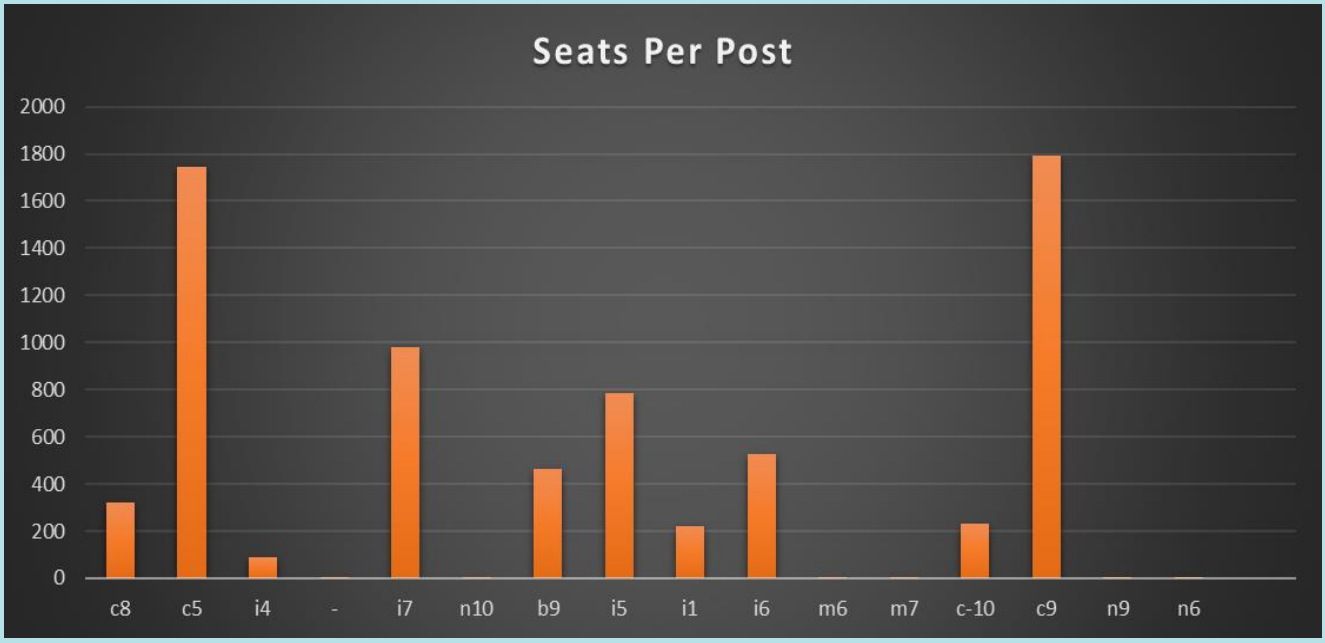
First, I used the Advanced filter to get unique departments, then I used the following to get the count.

=COUNTIFS(E2:E7169,"Service Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Operations Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Sales Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Finance Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Production Department",C2:C7169,"Hired")

=COUNTIFS(E2:E7169," Purchase Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Marketing Department",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," General Management",C2:C7169,"Hired")
=COUNTIFS(E2:E7169," Human Resource Department",C2:C7169,"Hired")

E. **Charts:** Use different charts and graphs to perform the task representing the data.
Your task: Represent different post tiers using chart/graph?

Diff Posts	Number Of Posts
c8	320
c5	1747
i4	88
-	1
i7	982
n10	1
b9	463
i5	787
i1	222
i6	527
m6	3
m7	1
c-10	232
c9	1792
n9	1
n6	1



I used the following function to execute it:

First, I used the Advanced filter to get unique posts, then I used the following to get the count.

=COUNTIF(F2:F7169,"c8")
=COUNTIF(F2:F7169,"c5")
=COUNTIF(F2:F7169,"i4")
=COUNTIF(F2:F7169,"-")
=COUNTIF(F2:F7169,"i7")
=COUNTIF(F2:F7169,"n10")
=COUNTIF(F2:F7169,"b9")
=COUNTIF(F2:F7169,"i5")
=COUNTIF(F2:F7169,"i1")
=COUNTIF(F2:F7169,"i6")
=COUNTIF(F2:F7169,"m6")
=COUNTIF(F2:F7169,"m7")
=COUNTIF(F2:F7169,"c-10")
=COUNTIF(F2:F7169,"c9")
=COUNTIF(F2:F7169,"n9")
=COUNTIF(F2:F7169,"n6")